

# OUTBREAK INVESTIGATION

An outbreak is defined as an unusual increase of disease within a population within a specific time and location. The baseline or expected number of scabies cases routinely present within a facility should be zero.

The purpose of a scabies outbreak investigation is to first determine and confirm the causative agent of the outbreak; establish epidemiological associations between persons, place, and time; implement control measures; and identify measures to prevent future outbreaks.

## **Definition of an "outbreak of scabies"**

The optimal definition of a scabies outbreak in a health care facility is one or more laboratory confirmed (via positive skin scraping) case of scabies and at least one or more suspected scabies case in patients, health care providers, visitors, and/or volunteers within a four week period of time.

If clinical suspicion for scabies infestation is high, but lab confirmation cannot be obtained, investigation should continue and a decision to proceed with treatment should be considered.

## **Outbreak Team**

Assemble an outbreak team of key personnel including infection control professionals, the medical director, housekeeping, administration, nursing, employee health (if available), and other departments as needed. The team will be responsible for assessing the scope of the outbreak and determining an appropriate course of action.

A member of the outbreak team should be designated to communicate outbreak information to the local health department.

The team should meet on a regular basis to share outbreak investigation information and plan for additional interventions.

## **Verify the Diagnosis**

Laboratory confirmation of scabies infestation should be attempted immediately upon identifying potential scabies cases. Follow the procedures in the "Specimen Collection and Laboratory Methods to Demonstrate Scabies" section to verify scabies infestation.

Negative skin scrapings may occur in cases during a real scabies outbreak due to the typically small number of mites that are present. Clinical presentation and exposure history should be considered when diagnosing scabies if this occurs. Proper collection technique should be reviewed.

An alternative diagnosis should be considered if multiple patients have negative skin scrapings and response to treatment is minimal after two weeks.

### **Search for Additional Scabies Cases**

Perform routine surveillance for additional cases.

Designate a staff member, such as the infection control professional or nursing supervisor, to receive additional scabies reports and serve as the outbreak coordinator. Request that staff inform the designated person if they notice patients with signs or symptoms typical of scabies infestation.

Any employee (including contract workers or volunteers) experiencing rash, itching, or skin lesions should be restricted from work until scabies has been ruled out or until treatment of scabies has been administered. Treated persons can return to work after the treatment period is complete.

Facilities should consider policies and procedures to address specific employee issues with scabies.

### **Data Collection Tools**

Data collection tools are extremely helpful in recognizing the distribution of scabies cases throughout a facility. In addition, data collections tools are useful in monitoring contacts of scabies cases for the development of symptoms. Sample collection tools can be found at the end of this section.

Case management logs should be developed and used to monitor symptomatic patients, visitors, health care providers, and other infested persons. The following information should be collected:

- ▲ Name
- ▲ Location (unit or floor) of admission, work, or visit
- ▲ Date(s) of admission, work, or visit(s)
- ▲ Symptom onset date
- ▲ Date and result of skin scraping (if obtained)
- ▲ Date of initial treatment
- ▲ Date of symptom resolution
- ▲ Date of second treatment if needed
- ▲ Date of symptom resolution after second treatment

- ▲ Type of scabies infestation
- ▲ Method of treatment
- ▲ Other pertinent information  
(e.g., risk factors for developing atypical scabies)

Additional information to collect on symptomatic patients include:

- ▲ Date of admission
- ▲ Other health care facilities visited in the past month
- ▲ Other nursing floors or units where admitted within the current facility
- ▲ Diagnostic and therapeutic procedures received
- ▲ Communal areas visited
- ▲ Places of visit if day or weekend pass has been issued in the past month

A list of contacts should be developed for each scabies case. The following information should be collected:

- ▲ Name and designation of resident, staff, visitor, or volunteer
- ▲ Source of exposure
- ▲ Date of exposure
- ▲ Symptom status
- ▲ Symptom onset
- ▲ Date of symptom resolution
- ▲ Dates of symptom evaluations
- ▲ Other pertinent information

**Notification**

Health care providers, visitors, volunteers, families, personal care workers, and others who have had contact with a scabies case should be notified immediately and assessed for symptoms. A scabies fact sheet and notification letter, which includes information about the scope of the outbreak and strategies that are being implemented to control the outbreak and prevent future cases, should be distributed to the above groups.

Additional persons to notify if contact with the case occurred in the past month include:

- ▲ Previous health care facility in which the person resided
- ▲ Transport workers such as EMTs and paramedics
- ▲ Roommates of the case who have been discharged or relocated to another unit, floor, or facility
- ▲ Visiting diagnostic and/or therapeutic workers
- ▲ Sexual partners, family members, and roommates of health care providers, volunteers, visitors, and personal care workers

The local health department and the Michigan Department of Community Health/Bureau of Health Services should be notified immediately of a facility outbreak. Information regarding scabies reporting can be found in the “Scabies Reporting” section.

Develop a summary report for dissemination which includes the location, number of cases, action plan, treatments, duration of outbreak, effectiveness of the plan, treatment modalities, and any follow-up measures that are being implemented.